Transport Canada / Transports Canada

MINISTERIAL DELEGATE STATEMENT OF COMPLIANCE WITH THE CERTIFICATION BASIS

DÉLÉGUÉ MINISTÉRIEL CONSTAT DE CONFORMITÉ AVEC LA BASE DE CERTIFICATION

1. Reference No. / N° de référence	2. Applicant Name / Nom de demandeur
NAPA File C-11-0786 Aero Design Project # 704	Aero Design Ltd.

Part 1: Identification of Aeronautical Product
Partie 1 : Identification des produits aéronautiques

3. Applicable Design Approval Document No. / N° du document d'approbation de la conception applicable
H-92

4. Model No. / N° de modèle	5. Make / Marque
206L, 206L-1, 206L-3, 206L-4, 407	Bell Helicopter Textron Canada Ltd.

6. Type (aircraft, engine, propeller, appliance, part) / Type (aéronef, moteur hélice, appareillage, pièce)
Helicopter

Part 2: Substantiating Reports and Data
Partie 2 : Rapports et des données pertinentes

7. Number / Numéro	8. Title / Titre
DCL704 Revision 7	Document Control List, and all documents referenced therein.

9. Purpose of Finding of Compliance / But de la constat de conformité

☐ New approval:
- ☐ Supplemental Type Certificate
- ☐ Supplemental Type Certificate-Limited
- ☐ Repair Design Certificate
- ☐ Other:

Update to modification configurations of cargo baskets

☐ Revise existing approval # SH00-48

No — The revised data requires the revision of the approval document.

Yes — The revised data is within the scope of the accepted Certification Plan.

10. Applicable Elements of Certification Basis / Éléments applicables de la base de certification

☒ Certification Plan: CP945 ☐ Letter of exention of delegation, dated:

Part 3: Ministerial Delegate Finding of Compliance with the Certification Basis
Partie 3 : Délégué ministériel constat de conformité avec la base de certification

Under the authority vested in me by the Minister under subsection 4.3(1) of the *Aeronautics Act*, I hereby find that the type design of the aeronautical product is in compliance with the certification basis as demonstrated by the applicant's substantiating reports and data to the best of my knowledge.

En vertu des pouvoirs qui m'ont été conférés par le ministre conformément au paragraphe 4.3(1) de la *Loi sur l'Aéronautique*, j'estime que, à ma connaissance, la définition de type du produit aéronautique est conforme à sa base de certification tel qu'il a été démontré par les rapports et les données pertinentes fournis par le demandeur.

11. Signature of Delegate(s) / Signature des délégués	12. Name / Nom	13. Delegate No. / N° de délégué	14. Date (yyyy-mm-dd) / Date (aaaa-mm-jj)
	E. Burgoin, Aero Design Ltd.	DAR 290M	2011-11-22

26-0757 (1004-01)

Canada

Transport Canada Transports Canada

MINISTERIAL DELEGATE STATEMENT OF COMPLIANCE WITH THE CERTIFICATION BASIS

DÉLÉGUÉ MINISTÉRIEL CONSTAT DE CONFORMITÉ AVEC LA BASE DE CERTIFICATION

Block 7 (continued from sheet 1)

Document Number	Revision	Title	Comment
DCL704	7	Document Control List	
70403	4	Auxiliary Latch Modification	
70404	2	Open Forward End Modification (Bell 206L/407 Quick Release)	
70405	3	Lid Step Modification	
70406	2	Open Forward End Modification (AS350/206B Quick Release)	
70411	0	Open Forward End Modification (Bell 206L/407 Quick Release)	
70412	0	Gas Spring Modification	
70422	0	Gas Spring Provisions Modification	

Documents listed below this line (if any) cannot be approved by the delegate:

DOCUMENT CONTROL LIST

DOCUMENT NO.	DOCUMENT CONTENT	REVISION
FABRICATION DOCUMENTS		
70401	Open Forward End Modification (Bell 206L/407 Fixed and McDonnell Douglas MD600N Quick Release Only)	1
70402	Lid Door Modification	1
70403	Auxiliary Latch Modification	4
70404	Open Forward End Modification (Bell 206L/407 Quick Release Only)	2
70405	Lid Step Modification	3
70406	Open Forward End Modification (Eurocopter AS350/AS355 and Bell 206B Quick Release Only)	2
70407	Open Forward End Modification (Eurocopter EC135 Quick Release Only)	0
70408	Installation, Hanger Wheel	0
70411	Open Forward End Modification (Bell 206L/407 Quick Release Only)	0
70412	Gas Spring Modification	0
70422	Gas Spring Provisions Modification	0
70428	Assembly, Hanger Wheel	0
70438	Parts, Hanger Wheel	0
ENGINEERING DOCUMENTS		
ER704.02	Engineering Report	0

APPROVAL:

ORIGINAL DATE:
10 May 2006
REVISION DATE:
27 October 2011

AERO DESIGN LTD.
2013 – 39th Ave NE, Calgary, Alberta, T2E 6R7
Ph. (403) 250-8027
Fax. (403) 250-8333

SHEET 1 OF 1

Cargo Basket Modifications

DCL704

Rev. **7**

FORM AE-100

DEPARTMENT OF TRANSPORT STATEMENT OF COMPLIANCE OF AIRCRAFT OR AIRCRAFT COMPONENTS WITH THE AIRWORTHINESS REQUIREMENTS					
Aircraft Mfgr:	Bell Helicopter Textron	Model Type		AE-100 No.:	AE704
Aircraft Model:	206L / 407			Initial Issue Date:	25 May, 2006
Registration:	All Eligible	Airplane	☐	Revision:	6
		Helicopter	☒	Revision Date:	20 October 2010
		Appliance	☐	Approval No.:	SH00-48
		Component	☐	Delegation No.:	290M
				Delegate Name:	E. Burgoin
				Classification of Designee:	
				Employer:	*AERO* Design Ltd.

LIST OF APPROVED REPORTS AND DATA

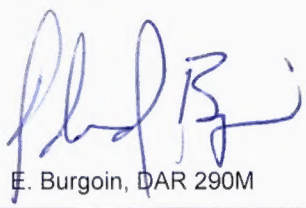
Document Number		Document Title	Compliance Status
DCL704	Revision 6	Document Control List and all documents referred to therein	
70401	Revision 1	Open Front End Modification	
70402	Revision 1	Lid Door Modification	
70403	Revision 3	Auxiliary Latch Modification	
70404	Revision 1	Open Front End Modification	
70405	Revision 2	Lid Step Modification	
70408	Revision 0	Hangar Wheel Installation	
70428	Revision 0	Hangar Wheel Assembly	
70438	Revision 0	Hangar Wheel Parts	
ER 704.02	Revision 0	Engineering Report	
		DATA APPROVED BY TRANSPORT CANADA	

CERTIFICATION

UNDER THE AUTHORITY VESTED IN ME BY THE DEPARTMENT OF TRANSPORT, I HEREBY CERTIFY THAT THE DATA LISTED ABOVE AND ON THE ATTACHED SHEETS NUMBERED Nil HAVE BEEN EXAMINED IN ACCORDANCE WITH ESTABLISHED PROCEDURES AND FOUND TO COMPLY, TO THE BEST OF MY KNOWLEDGE AND BELIEF WITH THE PERTINENT COMPLIANCE REQUIRMENTS.

I THEREFORE [☐] RECOMMEND FOR APPROVAL OF THESE DATA

[☒] APPROVE THESE DATA



E. Burgoin, DAR 290M

DOCUMENT CONTROL LIST

DOCUMENT NO.	DOCUMENT CONTENT	REVISION
FABRICATION DOCUMENTS		
~~70401~~	~~Open Forward End Modification~~	~~0~~
70402	Lid Door Modification	1
70403	Auxiliary Latch Modification	1
~~70404~~	~~Open Forward End Modification~~	~~1~~
70405	Lid Step Modification	1
70406	Open Forward End Modification	0
	70401 & 70404 ARE NOT APPLICABLE TO AS350 AS350 PER SH08-16. SEE AE-100 AE704 DA.	
ENGINEERING DOCUMENTS		
ER704.02	Engineering Report	0

APPROVAL:

Transport Canada / Transports Canada
AIRCRAFT CERTIFICATION DIVISION
APPROVED
By D. S. Austen
Appr'l No. SH08-16
Appr'l Date 08-04-11
Issue No. 1
Issue Date 08-04-11
YY - MM - DD

ORIGINAL DATE:
10 May 2006
REVISION DATE:
19 March, 2008

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SHEET 1 OF 1

Cargo Basket Modifications

DCL704

Rev. **2**

DOCUMENT CONTROL LIST

DOCUMENT NO.	DOCUMENT CONTENT	REVISION
FABRICATION DOCUMENTS		
70401	Open Forward End Modification (Bell 206L/407 Fixed Basket only)	0
70402	Lid Door Modification	1
70403	Auxiliary Latch Modification	2
70404	Open Forward End Modification (Quick Release Basket)	1
70405	Lid Step Modification	1
70406	Open Forward End Modification (Eurocopter AS350/AS355 Quick Release Only)	0
70407	Open Forward End Modification (Eurocopter EC135 Quick Release Only)	0
ENGINEERING DOCUMENTS		
ER704.02	Engineering Report	0

APPROVAL:

Transport Canada / Transports Canada
AIRCRAFT CERTIFICATION DIVISION
APPROVED
By D.S. Austin
Appr'l No. SH07-56
Appr'l Date 07-12-24
Issue No. 2
Issue Date 08-09-30
YY - MM - DD

ORIGINAL DATE:
10 May 2006
REVISION DATE:
31 July, 2008

AERO DESIGN LTD.
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SHEET 1 OF 1

Cargo Basket Modifications

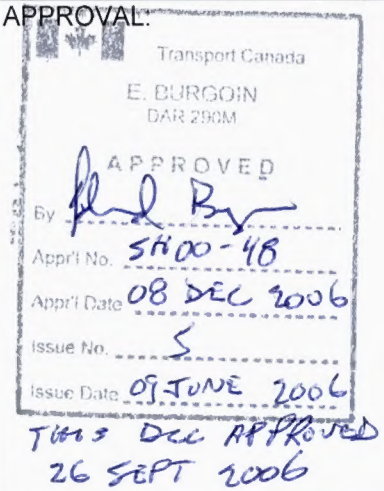
DCL704

Rev. **3**

DOCUMENT CONTROL LIST

DOCUMENT NO.	DOCUMENT CONTENT	REVISION
FABRICATION DOCUMENTS		
70401	Open Forward End Modification	0
70402	Lid Door Modification	0
70403	Auxiliary Latch Modification	0
70404	Open Forward End Modification	0
70405	Lid Step Modification	0
ENGINEERING DOCUMENTS		
ER704.02	Engineering Report	0

APPROVAL:



ORIGINAL DATE:
10 May 2006

REVISION DATE:
21 September, 2006

AERO DESIGN LTD.
2013 – 39th Ave NE, Calgary, Alberta, T2E 6R7
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SHEET 1 OF 1

Cargo Basket Modifications

DCL704

Rev. **1**

Structural Consideration for the Installation of the Hanger Wheel on AERO Design Baskets.

Reference Drawings: 70408 – Installation
70428 – Assemblies
70438 – Parts

Introduction:
The Hanger Wheel Installation is intended to operate as a ground support aid when the basket is detached from the helicopter.

The Hanger Wheel Assembly and Installation:
The combined weight of Hanger Wheel assembly is 0.8lbs. The Hanger Wheel is an assembly of an aluminum adaptor plate and a caster. These parts are assembled with four (4) stainless steel #10 screws and self locking nuts. This assembly is installed onto the basket with four (4) AN3 bolts and self locking nuts. This installation bares no load during all phases of flight and during landings and take-offs. It does not touch the ground.

Effects to the Basket:
The Hanger Wheel clamps onto the existing basket structure; no intrusive modification occurs to the basket during installation. The Hanger Wheel has no effect on the operation or strength of the basket.

SENDER RETAIN THIS COPY / COPIE DE L'EXPÉDITEUR

SENDER ACCOUNT NO. / N° DE COMPTE DE L'EXPÉDITEUR: 4367155

IMPORTANT -TÉLÉPHONE: (403) 250 8027

SENDER (FROM) / EXPÉDITEUR (DE): AERO DESIGN

MO DY/JR YR/AN: 01 05 07

STREET ADDRESS / ADRESSE (N° ET RUE): 2013 39 AVE NE

APT., SUITE / APP., BUREAU:

CITY / VILLE: CALGARY

PROV./STATE/ÉTAT: ALTA

POSTAL / ZIP: T2E 6R7

RECEIVER (TO) / DESTINATAIRE (À): OMEGA AVIATION

STREET ADDRESS / ADRESSE (N° ET RUE): 4360 AGAR DRIVE

APT., SUITE / APP., BUREAU:

CITY / VILLE: RICHMOND

PROV./STATE/ÉTAT: BC

POSTAL / ZIP: V7B 1A3

ATTN: (NAME / DEPT.) À L'ATTENTION DE (NOM / SERVICE): SHAWN JOHNSON

IMPORTANT -TÉLÉPHONE: 604 2735311

DESCRIPTION (INCLUDING DANGEROUS GOODS / INCLUANT MARCHANDISES DANGEREUSES): BASKET MOD KIT

DG / MD: ✓

SENDER REFERENCE (IF ANY) / REF. DE L'EXPÉD.:

PICK UP / CUEILLETTE - N° DE CONF.: 6971596 30008

SENDER SIGNATURE / SIGNATURE DE L'EXPÉDITEUR

X S. HAZEY X

SEE CONDITIONS OF CARRIAGE ON REVERSE / CONDITIONS DE TRANSPORT AU VERSO

SHIP MODE / MODE DE TRANSPORT

AIR / AÉRIEN: ✓

GROUND / ROUTIER:

PKG / EMBAL. — SERVICE

1 TYPE ONLY / TYPE SEULEMENT — 1 PIECE ONLY / 1 PIÈCE SEULEMENT

CHOOSE / CHOISIR 1

PURO-LETTER:

PURO-PAK:

OTHER / AUTRE: ✓

9 AM / 9 h: ✓

10:30AM / 10 h 30:

SAT. / SAM.:

PAYMENT / PAIEMENT

CASH / COMPTANT:

CREDIT CARD / CARTE DE CRÉDIT:

RECEIVER OR THIRD PARTY ACCOUNT NO. / N° DE COMPTE DU DESTINATAIRE OU TIERS

RECEIVER / DESTINATAIRE: ✓

3RD PARTY / TIERS:

SENDER / EXPÉDITEUR: ✓

SHIPMENT / DETAILS / EXPÉDITION

#/Nbre PCS (4 MAXIMUM): 1

WEIGHT / POIDS — SUBJ. TO CORR. / SUJET À CORR.

KG:

LB: 2

DECLARED VALUE / VALEUR DÉCLARÉE

(SURCHARGE APPLIES OVER $100) (SUPPLÉMENT AU-DESSUS DE 100 $)

$

$5,000 MAX. MAX 5 000 $

SEE CONDITIONS OF CARRIAGE ON REVERSE / CONDITIONS DE TRANSPORT AU VERSO

BILL OF LADING NO. -NOT NEGOTIABLE / N° DE CONNAISSEMENT -NON NÉGOCIABLE: 2747 320 1419

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1 888 SHIP-123 www.purolator.com

COURIER INITIALS / INITIALES DU COURRIER:

COURIER ROUTE / ITINÉRAIRE DU COURRIER: 265

MO DY/JR YR/AN: 15

NO./N° TYPE ☐ VISA ☐ MC ☐ AMEX

EXP. DATE D'EXP.

CHARGES / FRAIS

TOTAL AMOUNT / MONTANT TOTAL

THIRD PARTY BILLING NAME & ADDRESS / FACTURATION À UN TIERS (NOM & ADRESSE)

LIMITATION OF LIABILITY - IMPORTANT - PLEASE READ

THE AMOUNT OF ANY LOSS OR DAMAGE FOR WHICH THE CARRIER MAY BE LIABLE SHALL NOT EXCEED $2.00 PER POUND (OR $4.41 PER KILOGRAM) COMPUTED ON THE TOTAL WEIGHT OF THE SHIPMENT UNLESS A HIGHER VALUE IS DECLARED ON THE FACE OF THE BILL OF LADING BY THE CONSIGNOR (SENDER). MAXIMUM DECLARED VALUE SHALL NOT EXCEED $5,000. N.B. NOTE CAREFULLY CONDITIONS ON BACK HEREOF INCLUDING LIMITATIONS AND EXCLUSIONS OF CARRIER'S LIABILITY, WHICH ARE HEREBY ACCEPTED.

LIMITATION DE RESPONSABILITÉ - IMPORTANT - LISEZ S.V.P.

LE MONTANT DE TOUTE PERTE OU DOMMAGE DONT LE TRANSPORTEUR POURRAIT ÊTRE RESPONSABLE NE DOIT PAS EXCÉDER 2,00 $ LA LIVRE (OU 4,41 $ LE KILOGRAMME), CALCULÉ SUR LE POIDS TOTAL DE L'EXPÉDITION, À MOINS QU'UNE VALEUR SUPÉRIEURE N'AIT ÉTÉ DÉCLARÉE SUR LE RECTO DU CONNAISSEMENT PAR L'EXPÉDITEUR. LA VALEUR DÉCLARÉE MAXIMALE NE DÉPASSERA PAS 5 000 $. N.B. VEUILLEZ PRENDRE CONNAISSANCE DES CONDITIONS AU VERSO, Y COMPRIS LES LIMITATIONS ET EXCLUSIONS DE RESPONSABILITÉ DU TRANSPORTEUR, QUI SONT ACCEPTÉES PAR LES PRÉSENTES.

PLEASE REFER TO BILL OF LADING NUMBER FOR SHIPMENT STATUS / INQUIRIES.
POUR TOUT RENSEIGNEMENT, VEUILLEZ NOUS COMMUNIQUER LE NUMÉRO DE CONNAISSEMENT.

SENDER RETAIN THIS COPY / COPIE DE L'EXPÉDITEUR

Service Instruction
Retro-fittings Open Forward End Modification
Bell 206L / 407 Cargo Basket Assembly, Part no. 49205-01

Instructions for Modifying 206L/407 Cargo Basket Body Assembly, Part no. 49208-01

Preparation

1) Remove Cargo Basket Assembly, part no. 49205-01 from forward and aft support beams. Stow attachment hardware.
2) Disconnect Lid Brace Assembly, part no. 36280-01, from Cargo Basket Body sub-assembly, part no. 49208-01. Stow attachment hardware.
3) Remove Cargo Basket Lid sub-Assembly, part no. 49207-01 by removing CR3213-4-02 rivets securing hinge to basket.
4) Strip powder coating from Cargo Basket Body sub-assembly, part no. 49208-01 and sand blast to facilitate welding and re-coating.

Note: This is best done by a service company providing powder coating services.

Modification

5) Position ½" square tubing, part no. 70401-03 and 70401-04 into forward hoop of basket as shown on drawing 70401 and determine where the tubing and mesh needs to be cut. Tubing has been left long to facilitate cutting the mesh along intersections in mesh as shown on drawing 70401. Mark cut line on tubing with felt marker. Mark cut line on mesh with felt marker.
6) Cut ends of ½" tubing as marked in 5) above.
7) Cut mesh on front end of basket through intersections as marked in 5) above.
8) Grind welds securing mesh on front end of basket to forward hoop to free the mesh locally where ½" square tubing, part no. 70401-03 and 70401-04 are to be welded to forward hoop of the Cargo Basket Body sub-assembly, part no. 49208-01. Grind off only as many welds as required to gain access for welding. Bend mesh out of the way only enough to facilitate welding. Remove any excess weld material remaining on the ½" square tube.

Note: a) If mesh is damage during this process it must be replaced.
b) When grinding welds securing mesh take care not to grind into ½" tube material.

9) Weld in ½" square tubing, part no. 70401-03 and 70401-04 as shown on drawing 70401.

Note: c) Welding to be completed by GTAW method to AMS 2685C by Transport Canada approved welding facility.

10) Bend mesh on front end of basket back into position. Weld intersections of mesh to ½" square tubing – all locations.
11) Dress out any sharp edges remaining at weld locations

Re-Assembly

12) Powder coat Cargo Basket Body sub-assembly, part no. 49208-01 (original colour "sky white").
13) Re-install Cargo Basket Lid sub-Assembly, part no. 49207-01 using CR3213-4-02 rivets provided.
14) Re-connect Lid Brace Assembly, part no. 36280-01, to Cargo Basket Body sub-assembly, part no. 49208-01using existing hardware.
15) Attach completed Cargo Basket Assembly, part no. 49205-01 to forward and rear support beams using existing hardware.

Modification Parts List

a) Drawing 70401, Modification drawing
b) Part no. 70401-03, ½" square tube - 1 piece
c) Part no. 70401-04, ½" square tube - 1 piece
d) Part no. 70401-05, mesh – forward end - 1 piece (replacement if required)
e) ER70S-2, weld rod - 2 length 1/16" diameter
f) CR3213-4-02, rivets - 25 req'd

Service Instruction
Retro-fittings Open Forward End Modification
Bell 206L / 407 Cargo Basket Assembly, Part no. 49205-01

Instructions for Modifying 206L/407 Cargo Basket Body Assembly, Part no. 49208-01

Preparation

1) Remove Cargo Basket Assembly, part no. 49205-01 from forward and aft support beams. Stow attachment hardware.
2) Disconnect Lid Brace Assembly, part no. 36280-01, from Cargo Basket Body sub-assembly, part no. 49208-01. Stow attachment hardware.
3) Remove Cargo Basket Lid sub-Assembly, part no. 49207-01 by removing CR3213-4-02 rivets securing hinge to basket.
4) Strip powder coating from Cargo Basket Body sub-assembly, part no. 49208-01 and sand blast to facilitate welding and re-coating.

Note: This is best done by a service company providing powder coating services.

Modification

5) Position ½" square tubing, part no. 70401-03 and 70401-04 into forward hoop of basket as shown on drawing 70401 and determine where the tubing and mesh needs to be cut. Tubing has been left long to facilitate cutting the mesh along intersections in mesh as shown on drawing 70401. Mark cut line on tubing with felt marker. Mark cut line on mesh with felt marker.
6) Cut ends of ½" tubing as marked in 5) above.
7) Cut mesh on front end of basket through intersections as marked in 5) above.
8) Grind welds securing mesh on front end of basket to forward hoop to free the mesh locally where ½" square tubing, part no. 70401-03 and 70401-04 are to be welded to forward hoop of the Cargo Basket Body sub-assembly, part no. 49208-01. Grind off only as many welds as required to gain access for welding. Bend mesh out of the way only enough to facilitate welding. Remove any excess weld material remaining on the ½" square tube.

Note: a) If mesh is damage during this process it must be replaced.
b) When grinding welds securing mesh take care not to grind into ½" tube material.

9) Weld in ½" square tubing, part no. 70401-03 and 70401-04 as shown on drawing 70401.

Note: c) Welding to be completed by GTAW method to AMS 2685C by Transport Canada approved welding facility.

10) Bend mesh on front end of basket back into position. Weld intersections of mesh to ½" square tubing – all locations.
11) Dress out any sharp edges remaining at weld locations

Re-Assembly

12) Powder coat Cargo Basket Body sub-assembly, part no. 49208-01 (original colour "sky white").
13) Re-install Cargo Basket Lid sub-Assembly, part no. 49207-01 using CR3213-4-02 rivets provided.
14) Re-connect Lid Brace Assembly, part no. 36280-01, to Cargo Basket Body sub-assembly, part no. 49208-01using existing hardware.
15) Attach completed Cargo Basket Assembly, part no. 49205-01 to forward and rear support beams using existing hardware.

Modification Parts List

a) Drawing 70401, Modification drawing
b) Part no. 70401-03, ½" square tube - 1 piece
c) Part no. 70401-04, ½" square tube - 1 piece
d) Part no. 70401-05, mesh – forward end - 1 piece (replacement if required)
e) ER70S-2, weld rod - 2 length 1/16" diameter
f) CR3213-4-02, rivets - 25 req'd

DOCUMENT CONTROL LIST

DOCUMENT NO.	DOCUMENT CONTENT	REVISION
FABRICATION DOCUMENTS		
70401	Forward End Modification	0
70402	Lid Door Modification	0
70403	Auxiliary Latch Modification	0
ENGINEERING DOCUMENTS		
ER704.02	Engineering Report	0

APPROVAL:

Transport Canada / Transports Canada
AIRCRAFT CERTIFICATION DIVISION
APPROVED
By D. S. Austin
Appr'l No. SH00-48
Appr'l Date 00-12-08
Issue No. 5
Issue Date 06-06-09
YY - MM - DD

ORIGINAL DATE:
10 May 2006
REVISION DATE:

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Fax. (403) 250-8333

SHEET 1 OF 1

Cargo Basket Modifications

DCL704

Rev. **0**

FORM AE-100

DEPARTMENT OF TRANSPORT STATEMENT OF COMPLIANCE OF AIRCRAFT OR AIRCRAFT COMPONENTS WITH THE AIRWORTHINESS REQUIREMENTS		AE-100 No.: Initial Issue Date: Revision: Revision Date: Approval No.: Delegation No.: Delegate Name: Classification of Designee: Employer:	AE704 25 May, 2006 0 SH00-48 290M E. Burgoin *AERO* Design Ltd.
Aircraft Mfgr: Bell Aircraft Model: 206L Series, 407 Registration: All Eligible	Model Type Airplane ☐ Helicopter ☒ Appliance ☐ Component ☐		

LIST OF APPROVED REPORTS AND DATA

Document Number		Document Title	Compliance Status
DCL704	Revision 0	Document Control List and all documents referred to therein	
ER704.02	Revision 0	Engineering Report	
70401	Revision 0	Forward End Modification	
70402	Revision 0	Lid Door Modification	
70403	Revision 0	Auxiliary Latch Modification	
		DATA APPROVED BY TRANSPORT CANADA	

CERTIFICATION

UNDER THE AUTHORITY VESTED IN ME BY THE DEPARTMENT OF TRANSPORT, I HEREBY CERTIFY THAT THE DATA LISTED ABOVE AND ON THE ATTACHED SHEETS NUMBERED Nil HAVE BEEN EXAMINED IN ACCORDANCE WITH ESTABLISHED PROCEDURES AND FOUND TO COMPLY, TO THE BEST OF MY KNOWLEDGE AND BELIEF WITH THE PERTINENT COMPLIANCE REQUIRMENTS.

I THEREFORE [☐] RECOMMEND FOR APPROVAL OF THESE DATA

[☒] APPROVE THESE DATA

E. Burgoin, DAR 290M

DOCUMENT CONTROL LIST

DOCUMENT NO.	DOCUMENT CONTENT	REVISION
FABRICATION DOCUMENTS		
70401	Forward End Modification	0
70402	Lid Door Modification	0
70403	Auxiliary Latch Modification	0
ENGINEERING DOCUMENTS		
ER704.02	Engineering Report	0

APPROVAL:

ORIGINAL DATE:
10 May 2006
REVISION DATE:

AERO DESIGN LTD.
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Ph. (403) 250-8027
Fax. (403) 250-8333

SHEET 1 OF 1

Cargo Basket Modifications

DCL704

Rev. **0**

AERO Design Ltd.

ENGINEERING REPORT
ER704.02

CARGO BASKET

LID DOOR MODIFICATION

Approved: E. Burgoin, P. Eng.

Revision 0
Date: 24 February, 2006

AERO Design Ltd.
Engineering Consultants

2013 – 39th Avenue N.E., Calgary, Alberta T2E 6R7
Phone: (403) 250-8027
Fax: (403) 250-8333
E-Mail: aerodesign@telusplanet.net

TABLE OF CONTENTS

1.0 INTRODUCTION

A modification allowing an opening in the lid has been requested by an operator of the low mounted cargo basket. A piece of equipment is too tall to fit inside the basket and allow the lid to latch.

The solution is a door in the lid that can be opened when equipment is carried that is too tall for the lid to close, and that can be closed when not required.

2.0 REFERENCE

AERO Design Ltd. Drawing 70402

3.0 BASIS OF CERTIFICATION

Bell 407, TCDS H-92 (Highest of Bell 206L series and 407):

FAR part 27, dated October 2, 1964 Amendment 27-1 through 27-30; Paragraph 27.561(b)(3) at Amdt 27-24; Section 27.563 at Amdt. 27-25; Section 27.785 at Amdt 27-24; Section 27.1093 at amendment 27-8; and Section 27.173 and 27.175 at amendment 27-1.

Exemptions to FAR 27 are the deletion of sections: 27.562, 27.1195, and 27.952(b)(1).

This installation:

Same as the basis of certification as shown the Type Certificate Data Sheet.

4.0 LOADS

Since the occupants of the helicopter are not endangered by objects escaping from the basket upward during an emergency landing, the upward emergency landing load condition is not required.

The negative maneuvering condition (FAR 27.337) does apply. Only the basket contents are required, as the requirement is that the lid remains closed under the maneuvering condition. The entire basket lid was demonstrated to remain closed in TR362.02.

$n_{man\_neg} = 1.0$	Negative maneuvering load factor (Ref: FAR 27.337)
$n_{sf} = 1.5$	Safety factor (Ref: FAR 27.303)
$W_{cargo} = 200$ lb	Max. cargo load in basket (Ref: Placard on lid)
$W_{bay} = 75$ lb	Max. load per bay in basket (Ref: Placard on lid)

$P_{door} = W_{bay} \times n_{man\_neg} \times n_{sf}$

$P_{door} = 112.5$ lb	Ultimate load on door

5.0 TEST

Structural compliance of the lid door is shown by test. The basket was placed lid down on 2 x 4's on a table.

Figure 1 – Test Setup

Bags of lead shot, 25 lb. each, were stacked on the lid door. A total of 8 bags (200 lb.) was stacked on the lid door.

Figure 2 – Test (Side View)

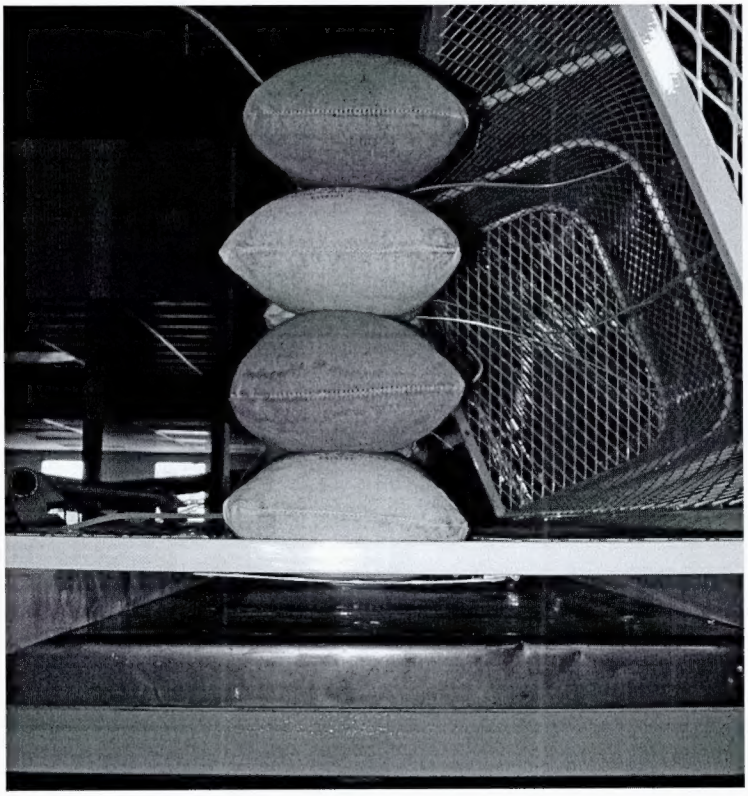

Figure 3 – Test (End View)

There was no permanent deformation of the door after the load was removed. The lid door is sufficient for installation on any configuration of the cargo basket, in any or all sections of the lid.